character of the ground was much of it hilly and raviney, whilst the attenuated and contorted shapes of the blocks involved a good deal of survey, but enclosed very little actual forest area.

39. The 16″ work on the Nira river in the Bhimthadi Táluka of the Poona District much resembles that on the Bhima and Pauna rivers, and there is comparatively little area to show for a considerable amount of survey and labour undergone.

40. The ground treated under the topographical survey on the scale of 8″ to the mile is most of it mountainous and rugged in the extreme, and also raviney; but being sparsely covered with timber, there was no difficulty in seeing the features of the ground, some of them on a very vast scale, and of most extraordinary shapes, and admitting of survey in great minute detail: it has been excellently rendered, and the maps are perfect pictures of the ground.

41. The total expenditure on forest surveys during the forest year ending 30th June 1893, is Rs. 31,082. The Superintendent reports that the year's work may be regarded as very satisfactory; and the Conservator has much pleasure in testifying to the zeal and energy with which Colonel Hutchinson and his Assistants have performed their duties during the year of this report.

CHAPTER II.

MANAGEMENT OF STATE FORESTS.

I.—REGULATION OF MANAGEMENT.

(*a*). Working Plans.

42. The Working Plans Officer with his staff, forming the Working Plans Division of the old Northern Circle, having been attached to the new Northern Circle when the two new circles were made, and no Working Plans Officer having been appointed to, and no Working Plans Division having been created for, the Central Circle, there have been no special arrangements for preparing working plans of the forests in the Deccan during the year of this report; but the several Divisional Forest Officers have, in addition to their other duties, undertaken the differentiation of their forest areas into forest blocks with the sub-division of the latter into compartments, and considerable progress has been made in this direction during the year, as will be seen.

43. Mr. Madan, Divisional Forest Officer, East Khándesh, has divided the Trans-Purna bábul reserves into two blocks, and each block into 40 compartments, for the exploitation of bábul (Acacia arabica) and subsequent restocking the worked area by ploughing the ground and sowing seeds of Acacia arabica mixed with nim (Melia azadirachta), blackwood (Dalbergia latifolia) and such other valuable species as are likely to thrive upon the soil. The forest areas in the Páchora and Jámner ranges have been provisionally differentiated into blocks with a view to their sub-division into compartments.

44. In the Násik Division the forests of the Násik, Igatpuri, Sinnar, Niphád and Nándgaon ranges have been parcelled out into forest blocks, and 34 compartments were laid out on the ground in 34 of the blocks, one in each, and some of these compartments have been converted into coupes, and have undergone exploitation. Maps of the blocks in the Nándgaon Range, with few exceptions, have been prepared by the Forest Survey; and those for Násik, Igatpuri, Sinnar, Málegaon and Dindori are in the course of preparation from the Revenue Survey maps; while the maps of the Niphád Range have been completed.

45. In the Ahmednagar Division the teak (Tectona grandis) forests of the Akola and Sangamner ranges were worked, as usual, in accordance with the scheme prepared by Mr. Hight several years ago; and a working plan, based on area, providing for a rotation of 40 years has been applied to 37 bábul reserves situated on the banks of large rivers and streams. Compartments have been made into coupes, and the timber to be removed has been felled and taken out, and some of the exploited coupes have been sown up and enclosed after the ground had been prepared for the reception of seeds.

46. A considerable portion of the forest area of the Poona Division has been differentiated on the maps into forest blocks; and during the year, 50 blocks were formed as under :—

Range.	No. of blocks.
Junnar...	17
A'mbegaon	10
Khed	7
Haveli...	6
Mával	5
Bhimthadi	5
Total ...	50

All these blocks have also been divided into 40 compartments; and 26 compartments in all the above ranges, except Bhimthadi, have been marked out on the ground for conversion into coupes for the timber operations of the ensuing season.

47. No working plans have been applied up to date to the forests in the Sátára Division; but the Divisional Forest Officer, Mr. Fagan, has drawn up provisional plans for the working of the whole of the teak region, except in the Pátan Range, on a rotation of 40 years, and the first experimental coupes in Jávli, Karád, Khandála, Khatáv, Koregaon, Sátára and Wái Ranges have been marked on the ground.

48. In the Sholápur Division provisional working plans for the exploitation of the bábul reserves, situated on the banks of streams and rivers, have been drawn up, and 10 coupes, aggregating an area of 277 acres, in the ranges of Sholápur, Mádha and Pandharpur have been sold for the exploitation of timber and firewood at the cost of the purchasers.

49. The laying out of forest blocks, and of the component compartments of forest blocks, upon the ground is retarded for the want of subordinates qualified in surveying to carry on this work in all divisions and in all ranges of every division. The forest areas are very wide-stretching and scattered, and the work of parcelling them all out into blocks and compartments, and of demarcating the boundaries upon the ground of the blocks and compartments, is herculean, and unless a large staff of surveyors is specially organized to undertake it in every division, the work must necessarily be of very slow progress. At best, only one compartment to become a coupe for the exploitation of timber and other forest produce from it, can be demarcated annually by the Range Forest Officers, and the one divisional surveyor, in the more accessible forest blocks of some of the ranges in a division; and the work is also to a certain extent hung up, while the forest areas are in a state of transition, under settlement inquiries, and sorting into classes.

Then, again, specially trained subordinates are required, in greater numbers than are at present available, in order to be able to prepare all the annual compartments of a division to become coupes. An ordinary forest guard, who has received no professional education, and whose natural intelligence is not of a high class, is not able to make a good selection of the trees in a compartment which are required to be reserved to live through another rotation, to select correctly the trees to be felled, and to make an enumeration, classification, contents calculation and valuation of the latter, and as the success of the working plans of forests of the Deccan depends greatly upon the way the sylvicultural rules drafted to regulate heavy improvement fellings are applied to the compartments in their conversion into coupes, it is necessary that the work should be entrusted to men who are capable of performing it satisfactorily.

(*b*). Annual Plans of Operations.

50. The annual plans of operations were, as usual, drawn up and submitted after the total figures of the sanctioned Budget Estimates of the year had been communicated, and they provided, among other operations, for the exploitation of timber and firewood by departmental fellings as well as by purchasers and